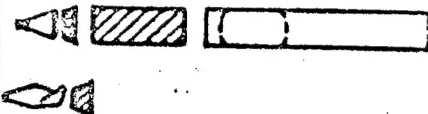
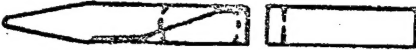
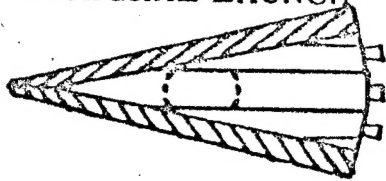


~~D SECRET~~ SPECIAL HANDLING
POTENTIAL VEHICLE SYSTEM CONCEPTS

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3.6

I INTEGRAL LAUNCH  Dispose all Segments each Mission.	II INTEGRAL LAUNCH  Retrieve/Reuse R. E. V. each Mission - Dispose all other Segments.	III RENDEZVOUS/RESUPPLY  Dispose R. E. V. + Supply Module (RRV) each Resupply Mission - Revisit/Reuse Orbiting Vehicle for ~ 1 year cycle.	IV RENDEZVOUS/RESUPPLY  Dispose Supply Module each Resupply Mission - Retrieve/Reuse R. E. V. - Revisit/Reuse Orbiting Vehicle for ~ 1 year cycle.
V RENDEZVOUS/RESUPPLY  Retrieve/Reuse R. E. V. + Supply Module (RRV) each Resupply Mission - Revisit/Reuse Orbiting Vehicle for ~ 1 year cycle.	VI RENDEZVOUS/RESUPPLY  Retrieve/Reuse Integrated R. E. V. + Supply Module + Lab - Revisit/Reuse Mission Module Lab ~ 1 year cycle	VII INTEGRAL LAUNCH  Retrieve/Reuse fully Integrated R. E. V. + Lab + Supply Module + Mission Module. Dispose conventional booster only.	VIII INTEGRAL LAUNCH  Retrieve/Reuse fully Integrated R. E. V. + Lab + Supply Module + Mission Module + Propulsion Sys. Dispose propellant tanks and pressurization system only.

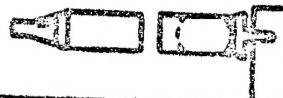
~~D SECRET~~ SPECIAL HANDLING

~~D SECRET~~ SPECIAL HANDLINGWHS-416
Page 9FOLLOW-ON SYSTEMS PERSPECTIVE

INTEGRAL

BASIC
P/L

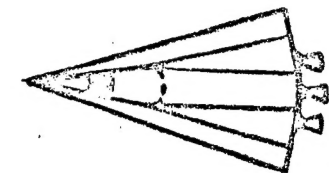
RESUPPLY

BASIC & ADV.
P/L

RESUPPLY

ADV. P/L OPS
& MULTI-MISSION

INTEGRAL

ADV. P/L OPS
& OTHER
MISSIONS

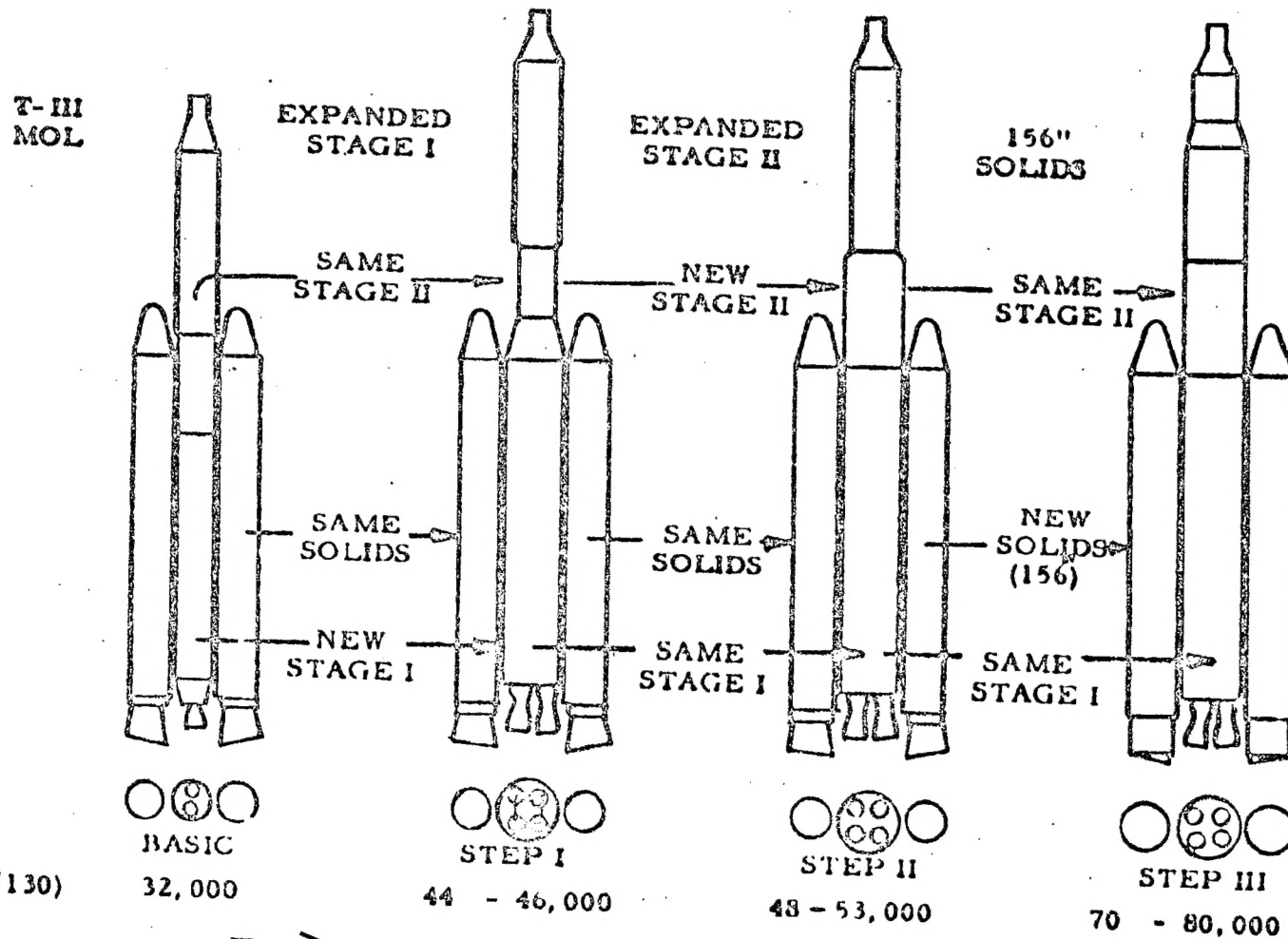
INITIAL PLANNING PERIOD

SYSTEM AVAILABILITY	1970	1973 - 1975	1978	POST 1980
R. E. V. TYPE	GEMINI B	GEMINI B	LIFTING BODY (MED L/D)	LIFTING BODY (HI L/D)
LAUNCH VEH.	T III M	T III M	LDC 1 & 2	STRAP-ON TANK- AGE
LAUNCH WEIGHT	31.0 K (1 = 90°)	30.0 K (1 = 96.4°)	47.0 K (1 = 96.4°)	~ 70.0 K
P/L TYPE	BASLINE 4"	BASIC (4") & ADV (2")	ADV (2") & MULT.	ADV (2") & OTHER
MISSION DURATION	30 DAYS	CONT. OPS - 1 YR.	CONT. OPS - 1 YR.	60 + DAYS
DEV. 'MT STATUS		60 D. RESUPPLY (BASIC)	50 D. RESUPPLY	
R. E. VEHICLE	PHASE II	PHASE II	TECHNOLOGY STUDIES	PROPOSED BY
LAB. MOD.	"	"	COMPONENTS IN Q II	INDUSTRY
MISS. MOD.	"	"	PRELIMINARY STUDIES	
LAUNCH VEHICLE	"	"	PRELIMINARY STUDIES	
DEV'MT CYCLE	5 YR	3 YR (BASIC)	7 YR	10-12 YRS
△ NRC - (ROM)	0	275 M\$	1,200 M\$	2,000 M\$

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~~D~~ SECRET SPECIAL HANDLING
POSSIBLE MOL LAUNCH VEHICLE EVOLUTION

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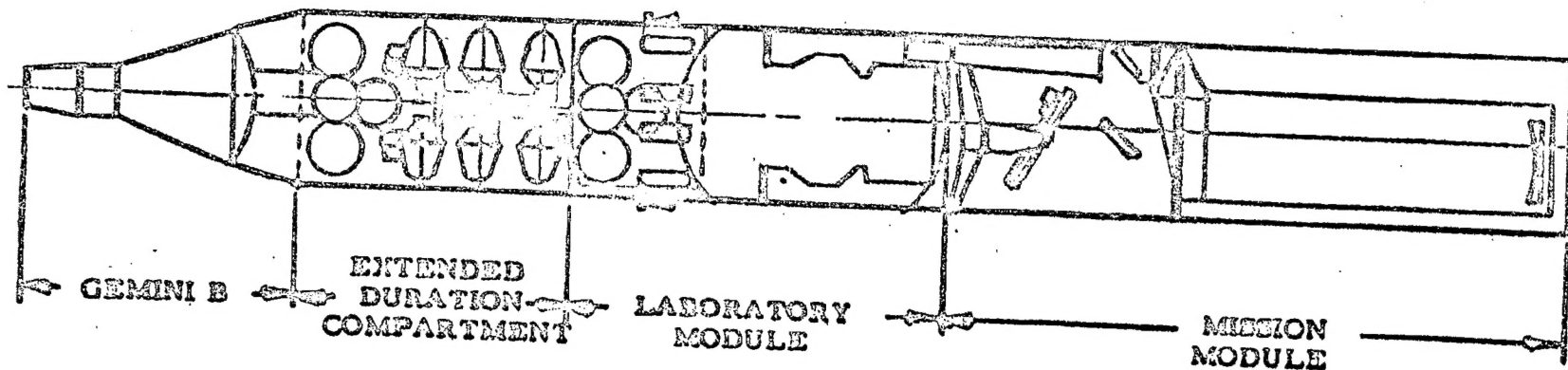
~~D~~ SECRET SPECIAL HANDLING

~~D SECRET~~ SPECIAL HANDLING

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EXTENDED DURATION INTEGRAL LAUNCH

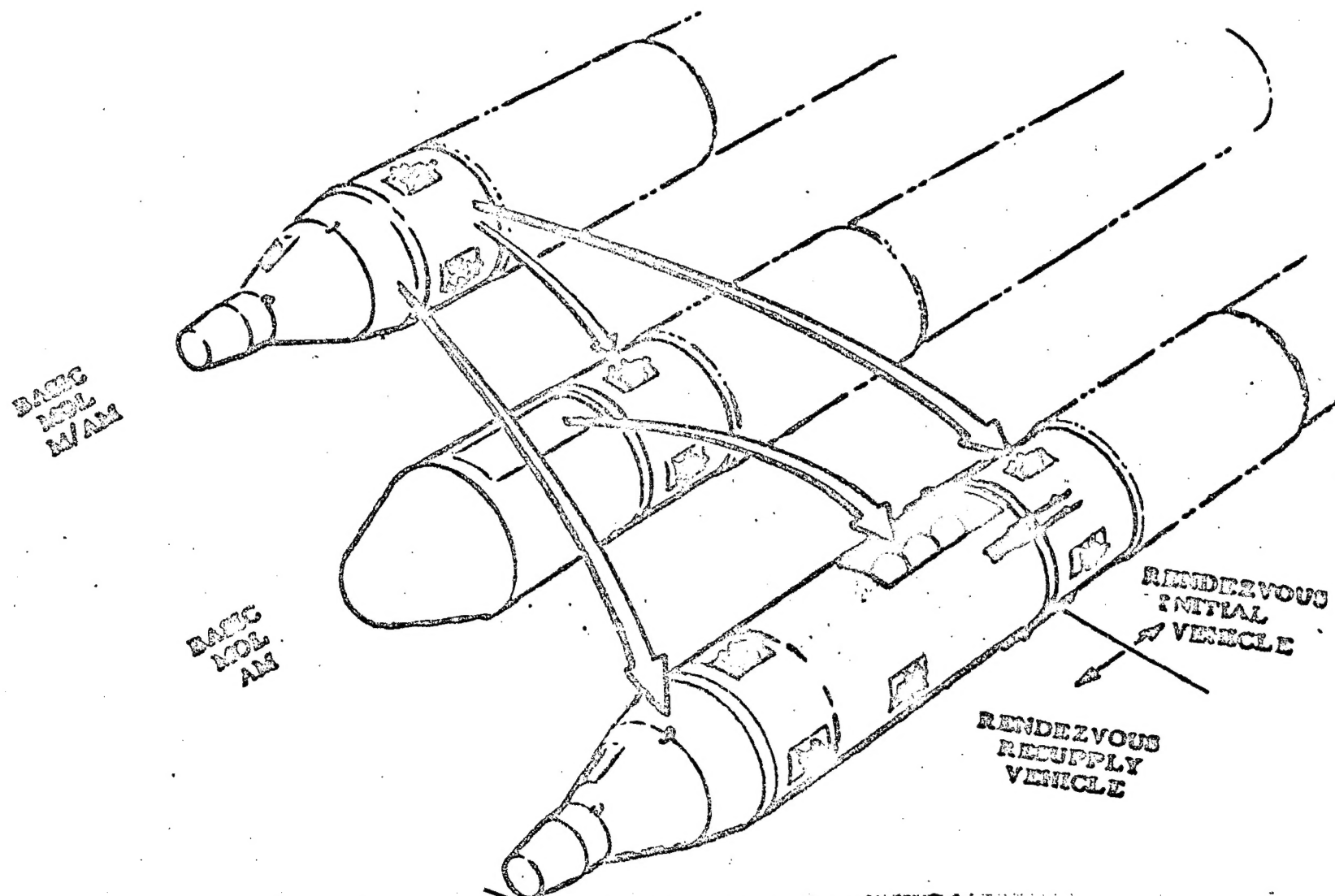
ORBITING VEHICLE
(50 DAY MISSION DURATION)
(LDC 1 BOOSTER)



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~~D SECRET~~ SPECIAL HANDLING
RESUPPLY SYSTEM CONCEPT

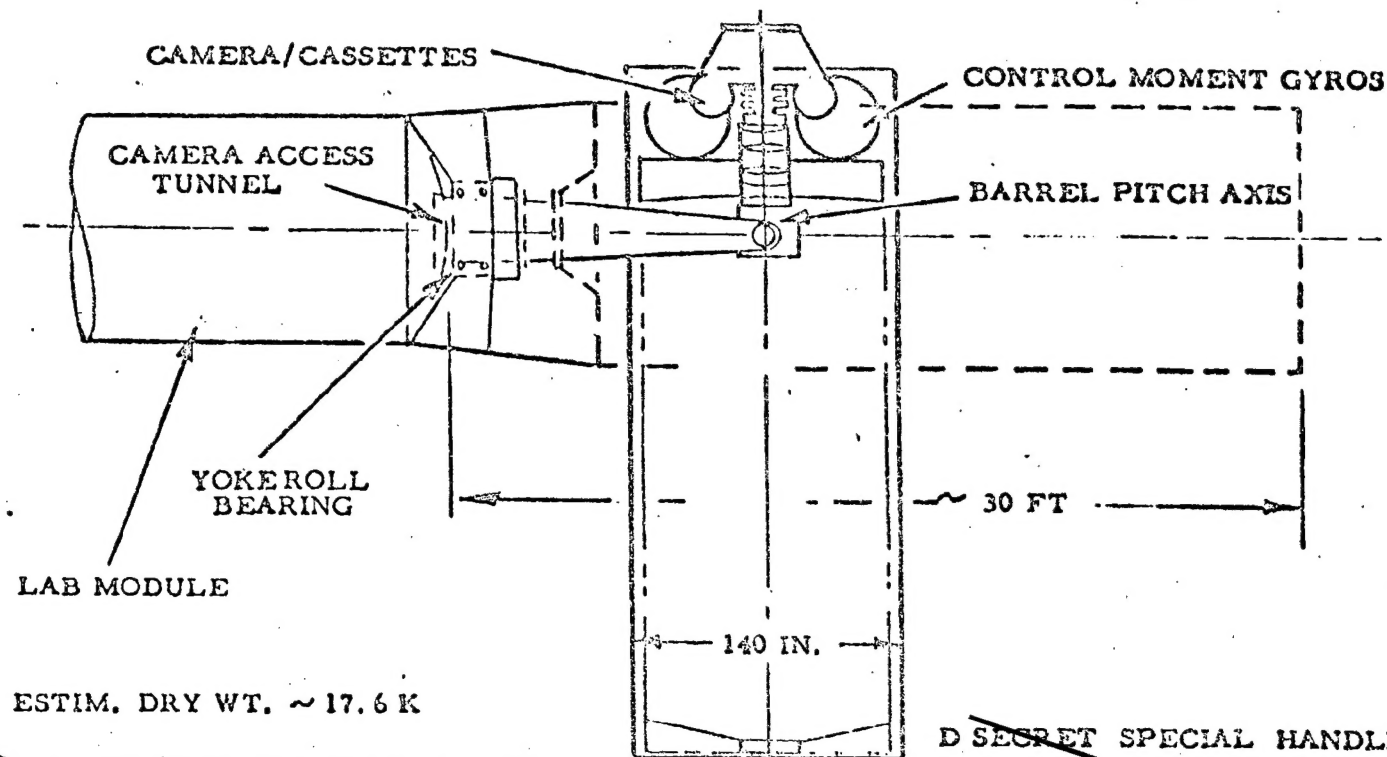
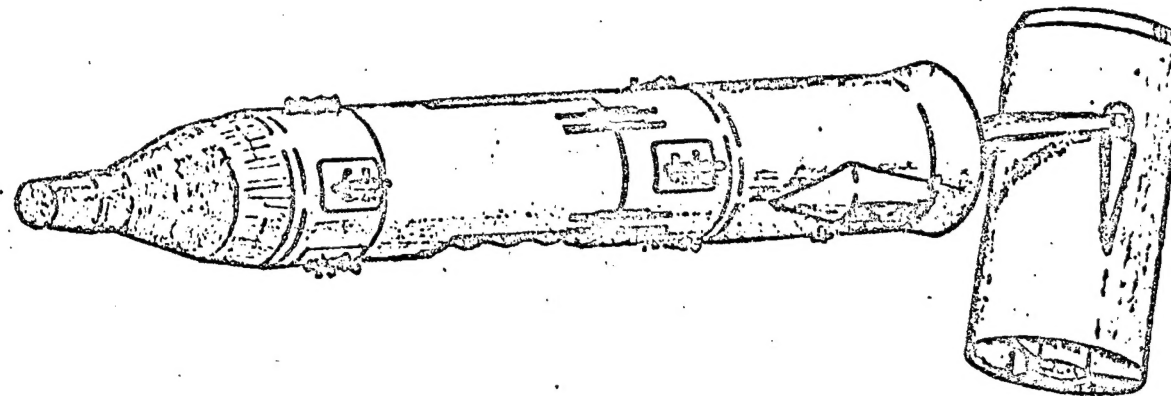
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~~D SECRET~~ SPECIAL HANDLING
POSSIBLE ADVANCED PAYLOAD CONFIGURATION

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ESTIM. DRY WT. ~ 17.6 K

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SELECTED EARLY FOLLOW-ON ALTERNATIVES

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○ INTEGRAL LAUNCH OPERATIONS

BASIC
MOL
PROGRAM



EDAM

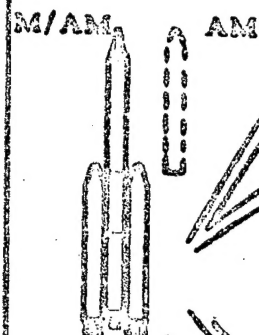


- THM M
- 4" RES. P/L
- 30 DAY

- THM M
- 4" RES. P/L
- 45 DAY

..... (BASELINE SYSTEMS)

(EXTENDED DURATION SYSTEMS)



- THM LDC 1
- 4" RES. P/L
- 30 DAY

- THM LDC 1 & 2
- 2" RES. ADV. P/L
- 60 DAY

- THM M
- 4" RES. P/L
- 30 DAY

○ RENDEZVOUS/RESUPPLY OPERATIONS

RIV



RRV



- THM M
- 4" RES. P/L
- CONT. OPS
- 60 DAY RESUPPLY

RIV

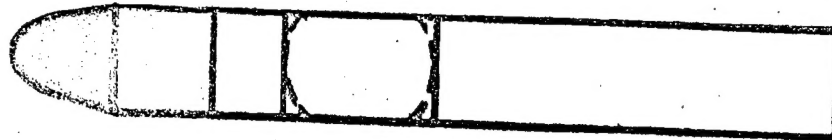
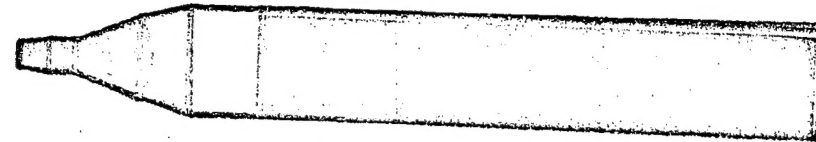
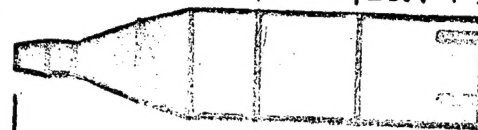


RRV



- THM
- 2" RES. ADV. P/L
- CONT. OPS.
- 30 DAY RESUPPLY

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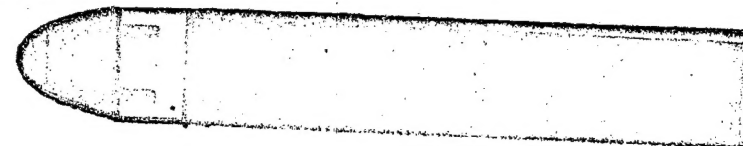
D~~SECRET~~ SPECIAL HANDLINGRESUPPLY SYSTEM DERIVATION FROM MOL HARDWAREWHS-416
Page 17BASELINE AM VEHICLEBASELINE M/AM VEHICLERENDEZVOUS RESUPPLY VEHICLE(RRV)DRV + FILM HANDLING
SYSTEM

GEMINI B
LABORATORY
UNPRESSURIZED
COMPARTMENT

EXTENDED
DURATION
MODULE

- ADD BASELINE SUBSYSTEM COMPONENTS

- ADD DOCKING SYSTEM AND INTERFACE

RENDEZVOUS INITIAL VEHICLE(RIV)

- DELETE GEMINI B
- ADD EXTENDED DURATION PROVISIONS
- ADD DOCKING SYSTEM AND INTERFACE
- ADD ASCENT FAIRING

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